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HIGH-FUNCTIONING AUTISM THROUGH THEUSE OF COGNITIVE
BEHAVIOR THERAPY, ACCEPTANCE AND COMMITMENT THERAPY,
AND DIALECTICAL BEHAVIOR THERAPY

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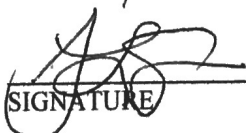
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Managing Anxiety in Autism:
Adolescent Students with High-Functioning Autism through the
Use of Cognitive Behavior Therapy, Acceptance and Commitment Therapy, and
Dialectical Behavior Therapy

by

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Project Abstract

The author of this study designed the manual, “Managing Anxiety,” to guide educators in addressing the needs of students with high-functioning autism and comorbid anxiety, through the implementation of Cognitive Behavioral Therapy (CBT), Acceptance and Commitment Therapy (ACT), and Dialectical Behavioral Therapy (DBT). According to recent research data, students with high-functioning autism are often found to have comorbid anxiety (Simonoff, Charman, Chandler, Loucas & Baird, 2008). The range of incidence of anxiety disorders found in children who have autism spectrum disorders (ASD) is between 11% and 84% (White, Oswald, Ollendick, & Scahill, 2009). Students with autism, as well as students in general education settings, report a decrease in anxious thoughts and actions following implementation of Cognitive Behavioral Therapy, Acceptance and Commitment Therapy, and Dialectical Behavior Therapy in their lives (Barrett, Duffy, Dadds, & Rapee, 2001; Bodden, Bogles, Nauta, Haan, Rigrose, Appelboom, Brinkman, Appelboom-Geerts, 2008; Kendall, Hudson, Gosch, Flannery-Schroeder, & Suveg, 2008; Ost, 2014; Neacsiu, Eberle, Kramer, Wiesmann, & Linehan, 2014; Ritschel, Cheavens, & Nelson, 2012; Swain, Hancock, Hainsworth, & Bowman, 2013).

The development of this project focused on four concepts within the realm of CBT, ACT, and DBT: recognizing anxiety symptoms, acceptance, coping strategies, and exposure exercises. This manual contains several lessons that incorporate collaborative activities such as role-play and visualization exercises. Homework and assessments were also embedded within the lessons in order to provide reinforcement. This manual gives students the tools needed to cope with the anxiety that results from the struggles that come with having autism.

Throughout the design of this project, the author obtained thorough evidence on the impact of CBT, ACT, and DBT strategies when used with students who have autism and comorbid anxiety. By using these evidence-based strategies with the guidance of an educator, students develop practical skills to manage their anxiety in and outside of the classroom.

Keywords: Acceptance and Commitment Therapy (ACT), anxiety, autism spectrum disorders (ASD), Cognitive Behavioral Therapy (CBT), comorbid anxiety, Dialectical Behavior Therapy (DBT), general education students, high-functioning autism, students with autism, typical peers

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Chapter One: Definition of Problem

Society is witnessing an alarming increase in the incidence of anxiety disorders, particularly in adolescents and children who have autism (Van Pelt, 2010). Clinically elevated comorbid anxiety is typically found in youth with ASD (Simonoff et al., 2008). The prevalence of anxiety disorders associated in youth with ASD is between 11% to 84% (White et al., 2009). There are plenty of supports to aid typically developing students in the general education setting, but not students with ASD and comorbid anxiety. Anxiety is a debilitating condition that affects students' academic and personal lives (Simonoff et al., 2008). It is treatable, though, and with the appropriate guidance and tools for students with ASD, it can be managed.

There is a large body of evidence that supports the efficacy of practices based on behavioral therapy research in decreasing anxiety symptoms in youth. CBT, ACT, and DBT are found to improve somatic and psychological symptoms pertaining to anxiety (Barret, Duffy, Dadds, & Rapee, 2001; Bodden et al., 2008; Neacsiu, Eberle, Kramer, Wiesmann, & Linehan, 2014; Swain, Hancock, Hainsworth, & Bowman, Ost, 2014). There have been supportive studies indicating that these same behavioral therapies help youth with ASD as well (Chalfant, Rapee, & Carroll, 2007; Reaven, Blakeley-Smith, Culhane-Shelburne, & Hepburn, 2012; Reaven, Blakeley-Smith, Nichols, Dasari, Flanigan, Hepburn, 2008; Sofronoff, Attwood, & Hinton, 2005; Wood, Drahota, Sze, Van Dyke, Decker, Fujii, Spiker, 2009).

These research practices have not been widely implemented for practical use in the school setting for students with ASD. These behavioral therapies have been commonly carried out separately, rarely intertwining to extract the greatest positive outcome for students with ASD and comorbid anxiety. This project manual attempts to combine these three strategies, to better support students who live with autism and comorbid anxiety.

A possible solution to help students with ASD learn to cope with their comorbid anxiety is to utilize the appropriate strategies and skills from Cognitive Behavior Therapy, Acceptance and Behavior Therapy, and Dialectical Behavior Therapy and combine them together. By providing a safe classroom environment and guided instruction, students are able to practice these skills and better cope with their anxiety. The incorporation of these skills and strategies into the students' instruction provides a space for students with ASD to practice these skills and strategies in a safe environment. The identification of comorbid problems is an important task for parents and is crucial to the management of ASD as the impact of these additional problems can be reduced using a range of evidence-based interventions (Chandler et al., 2015).

Statement of the Problem

There is not enough research or curriculum geared towards helping students with ASD learn to cope with their comorbid anxiety. The author and researcher developed a curriculum that combines three behavioral therapies: Cognitive Behavioral Therapy, Acceptance and Commitment Therapy, and Dialectical and Behavior Therapy, and incorporates them in a classroom setting that is intended to be guided by an instructor to support students with ASD and comorbid anxiety.

Purpose of Project

The purpose of this project is to guide educators in how to aid students with autism manage their anxiety through a creative and supportive educational manual. Each lesson within the manual includes an opening, activities, and assessments. Creating a comprehensive manual that uses CBT, ACT, and DBT provides guided support needed not only for students with anxiety, but also students with high-functioning ASD and comorbid anxiety. Students with ASD are often found afflicted with anxiety (Maddox & White, 2015). Many anxiety management

manuals in the past have been developed for neuro-typical students. Although there are studies that demonstrate the benefits of CBT, ACT, and DBT in managing anxiety, there is still a need for anxiety management manuals geared towards students with high-functioning autism (Webb, Beard, Kertz, Hsu, Bjorgvinsson, 2016).

Research Questions

Are the constructs of anxiety and ASD correlated to a degree that warrants a comprehensive intervention?

How effective is the integration of CBT, ACT, and DBT in alleviating anxiety symptoms in students with high-functioning autism?

Preview Literature

Research indicates that anxiety disorders appear to be the most prevalent among the high-functioning ASD population (Hofvander et al., 2009; Lecavalier, 2006; Rumsey, Rapoport, & Sceery, 1985; Shtayermman, 2007; Skokauskas & Gallagher, 2010). This stresses the need for effective interventions (Spek, Ham, Nyklicek, 2013). Application of CBT has been found to alleviate anxiety symptoms in individuals with ASD (Wood et al., 2015). There are some studies that demonstrate efficacy in decreasing anxiety among the neuro-typical and ASD population when using ACT or DBT (Spek et al., 2013; Katz, Fotti, Postl, 2009). However, the evidence for these treatments is limited (Katz et al., 2009) as well as analysis of treatment post study over a long period of time (Katz et al., 2009; Hofmann, Heering, Sawyer, Asnaani, 2009; Webb, Beard, Kertz, Hsu, Bjorgvinsson, 2016).

Preview Methodology

The author collected a range of research articles associated with alleviating anxiety symptoms through CBT, ACT, or DBT in typically developing students and students with ASD.

The author developed a manual that incorporates the most appropriate strategies and skills from CBT, ACT, and DBT for managing anxiety in students with ASD. Currently, there are anxiety management manuals that utilize each behavior therapy separately to support neuro-typical individuals, but there are few manuals that integrate behavior therapies to support students with ASD and comorbid anxiety. In developing the manual, research studies that found the most appropriate and effective therapies and strategies for helping students with autism manage their anxiety were taken into consideration.

Significance of Project

Anxiety disorders are among the most prevalent and most elevated in students with ASD as compared to the general population (Chandler et al., 2015). The importance of finding effective interventions for anxiety management in students with ASD cannot be emphasized enough. Anxiety impacts social, emotional, and academic aspects of students' lives (Chang, Quan, Wood, 2012). Research suggests that anxiety disorders affect relationships, peer interactions, and often continue on into adulthood (Chang, Quan, Wood, 2012). When ASD is present, social functioning becomes of greater concern, as both disorders have been linked to long-term, negative outcomes and high rates of anxiety (Chang, Quan, Wood, 2012). Though limited, there are studies indicating the efficacy of alleviating anxiety symptoms through the use of CBT, ACT, and DBT (Wood et al., 2015; Spek et al., 2013; Katz et al., 2009). A need exists to create a manual for the specific needs of students with ASD and comorbid anxiety. This study integrates all three behavioral therapies, providing effective behavior therapy through research-based practices in a comprehensive and integrated manual that gives instructors the opportunity to support students with ASD and comorbid anxiety, as well as giving students the tools to learn to manage their anxiety on their own.

Summary of Chapter

Students with autism face a higher prevalence of anxiety disorders than their typically developing peers (Maddox, White, 2015). Though studies are limited, existing studies indicate that CBT, ACT, and DBT help alleviate anxiety symptoms in individuals with ASD (Wood et al., 2015; Spek et al., 2013; Katz et al., 2009). Through the integration of CBT, ACT, and DBT, this manual provides educators a unique tool to help students with autism manage their anxiety. The manual provides specific lessons, activities, role-play and visualization exercises. Homework and assessments are embedded in the lessons to maximize success. By using a combination therapy approach, educators will assist students in learning skills to manage their anxiety both at school, as well as in their personal lives. Ultimately, it is hoped that individuals who are able to manage their anxiety will lead happier more productive lives.

Definitions

Acceptance and Commitment Therapy (ACT): “A unique empirically based psychological intervention that uses acceptance and mindfulness strategies, together with commitment and behavior change strategies to increase psychological flexibility” (<https://contextualscience.org/act>).

Anxiety Disorder: “Anxiety is a natural response and a necessary warning adaptations in humans. Anxiety can become a pathologic disorder when it is excessive and uncontrollable, requires no specific external stimulus, and manifests with a wide range of physical and affective symptoms as well as changes in behavior and cognition” (<http://www.clevelandclinicmeded.com/medicalpubs/diseasemanagement/psychiatry-psychology/anxiety-disorder/>).

Autism Spectrum Disorder (ASD): “A neurodevelopmental disorder characterized by impairments in reciprocal social interaction, communication, and repetitive, stereotyped interests and behaviors” (Paediatric Neurosciences, Newcomen Centre, Guy’s & St Thomas’ NHS Foundation Trust, King’s Health Partners, London).

Cognitive Behavioral Therapy (CBT): “Explores relationships among a person’s thoughts, feelings, and behaviors. CBT helps to uncover unhealthy patterns of thought and how they may be causing self-destructive behaviors and beliefs” (<http://www.nami.org/Learn-More/Treatment/Psychotherapy>).

Comorbid- “When two disorders or illnesses occur in the same person, simultaneously or sequentially, they are described as comorbid” (<https://www.drugabuse.gov/publications/research-reports/comorbidity-addiction-other-mental-illnesses/what-comorbidity>).

Dialectical Behavior Therapy (DBT): “A modified form of Cognitive Behavioral Therapy. It offers strategies for dealing with anxiety that regular CBT treatments do not usually include, such as interpersonal skills, and emotion regulation skills” (Chapman, Alexander L.; Gratz, Kim L.; Tull, Matthew. *The Dialectical Behavior Therapy Skills Workbook for Anxiety: Breaking Free from Worry, Panic, PTSD, and Other Anxiety Symptoms* (Kindle Locations 564-565). New Harbinger Publications. Kindle Edition).

Chapter Two: Literature Review

Individuals with high-functioning autism have a higher incidence of anxiety compared with their normally developing peers (Simonoff et al., 2008). There is a relative dearth of research and curriculum geared towards helping students with ASD learn to cope with their comorbid anxiety in classroom settings. Anxiety impacts social, emotional, and academic aspects of students' lives. Research suggests that anxiety disorders affect relationships, peer interactions, and often continue into adulthood (Katz et al., 2009). When ASD is present, social functioning becomes of greater concern, as both disorders have been linked to long-term negative outcomes and high rates of anxiety (Chang et al., 2012). Educators can guide students with high-functioning autism in coping with their anxiety by creating a safe environment in which these students can practice the strategies and skills needed to manage their anxiety in a classroom setting, as well as in their personal lives. Students with high-functioning autism face challenges with social skills, thus they experience social isolation and have a lack of knowledge regarding initiating and maintaining relationships (Muller, Schuler, & Yates, 2008). They have few opportunities to learn new skills in order to manage their anxiety or practice coping skills when dealing with anxiety provoking situations (Maddox, White, 2015). Researchers have determined that Cognitive Behavioral Therapy (CBT), Acceptance and Commitment Therapy (ACT), and Dialectical Behavioral Therapy (DBT) may help alleviate anxiety symptoms in individuals with ASD (Katz et al., 2009; Spek et al., 2013; Wood et al., 2015).

A comprehensive manual that incorporates all three behavioral therapies to address the needs in students with autism and comorbid anxiety has yet to be created. Addressing the unique needs of students with autism in managing their anxiety is paramount to educators because it increases efficacy in working with students with high-functioning autism and comorbid anxiety.

A comprehensive manual is also needed for the benefit of the student in order to regain control of his or her life by implementing practical strategies and tools that can be used interchangeably in classroom settings and everyday life. In addition, the strategies and skills incorporated in a comprehensive manual may benefit neuro-typical peers as well.

Based on the current academic research on the effectiveness of behavioral therapies for students with high-functioning autism and comorbid anxiety, the author has noted three major themes: 1) There is a higher prevalence of anxiety among students with ASD compared to their neuro-typical developing peers. This greatly emphasizes the need for specific supports for the students with autism and comorbid anxiety. 2) Research has shown that CBT, ACT, and DBT help alleviate anxiety symptoms in neuro-typical individuals and individuals with high-functioning autism (Hartmann, Urbano, Manser, and Okwara, 2012; Hofmann, Heering, Sawyer, Asnaani, 2009; Maddox, White, 2015; Pahnke, Lundgren, Hursti and Hirvikoski, 2013). 3) Currently, research is limited or lacking in the field of anxiety post treatment (Katz et al., 2009; Hofmann et al., 2009; Webb, Beard, Kertz, Hsu, Bjorgvinsson, 2016).

Theme 1: There is a Higher Prevalence of Anxiety in Students with High-Functioning ASD

There is a consensus among researchers that clinically elevated anxiety is a common impairing feature in autism spectrum disorders (Ehrenreich-May, Alessandri, Fujii, Renno, Laugeson, Piacentini, 2015; Simonoff, Pickles, Charman, Chandler, Loucas, Baird, 2008). Anxiety is the most common comorbid disorder among individuals with autism (Simonoff et al., 2008). Students with high-functioning autism face challenges that are not as common in their typically developing peers.

Some researchers believe that individuals with high-functioning ASD are likely to be

influenced by deficits in processing emotional stimuli for self and others, expressing emotions verbally, and self-regulating emotions (Bird, Press, & Richardson, 2011; Bolte, Feineis-Matthews, & Poustka, 2008; Laurent & Rubin, 2004; Montgomery, Stoesz, & McCrimmon, 2013; Samson, Huber, & Gross, 2012). Students with high-functioning ASD face emotional challenges due to social, communication, and sensory challenges (Lum, Garnett, O'Connor, 2014). This results in a vicious cycle of avoidance and negative reinforcement and as a result increased rates of anxiety among high-functioning students with ASD (Ehrenreich-May, Alessandri, Fujii, Renno, Laugeson, Piacentini, 2015). When compared to typically developing youth, Kuusikko found that social anxiety and behavioral avoidance are more pronounced among early adolescents with high-functioning ASD (Kuusikko, Pollock-Wurman, Jussila, Carter, Mattila, Ebeling, Pauls, & Moilanen, 2008). According to Kuusikko and colleagues, youth with high-functioning ASD might begin to observe and comprehend their own impaired social skills thus increasing the likelihood of self-consciousness in anxious situations, leading to behavioral withdrawal and other outward manifestations of anxiety (Kuusikko et al., 2008). Although considerable work has been done addressing the treatment needs of young children with ASD, there is still a lack of attention given to treatments for adolescents with high-functioning ASD (Dawson, Rogers, Munson, Smith, Winter, Greenson, Donaldson, & Varley, 2010; Kasari, 2002).

Theme 2: CBT, ACT, DBT Alleviate Anxiety Symptoms in all Students

Cognitive Behavioral Therapy (CBT) and Dialectical Behavioral Therapy (DBT) are two types of psychotherapies used in treatment of children and adolescents (Katz et al., 2009).

Acceptance and Commitment Therapy (ACT) is a type of behavior therapy, based on CBT that includes additional techniques such as cognitive defusion, acceptance, mindfulness, values and

commitment methods (Pahnke et al., 2013). Although the majority of research studies have been conducted on whether CBT, ACT, and/or DBT are an effective form of treatment for neuro-typical individuals, there are recent studies indicating that CBT, ACT, and DBT help alleviate anxiety symptoms in children and adolescents with autism (Hartmann, Urbano, Manser, and Okwara, 2012; Hofmann et al., 2009; Maddox, White, 2015; Pahnke et al., 2013)

Steensel et al. (2015) sought to determine the effectiveness of CBT on students with ASD. Currently, research is limited to the effectiveness of CBT on students with autism and a comparison study between the effectiveness of CBT on students with autism and without autism. In this quantitative study, 200 children with and without ASD were compared. After the study was conducted, it was found that anxiety in children with ASD decreased. The ASD group showed less improvement than the children without ASD. Treatment gains were maintained up to two years for the group with ASD. Over time, children with ASD showed less improvement with respect to their anxiety symptoms and quality of life, when compared to children without ASD. The reason for this could be that children with ASD have more trouble implementing and generalizing learned skills and/or ASD symptoms are interfering with treatment (Ozsivadjian, & Knott, 2011). Although CBT is less effective on individuals with ASD compared to individuals without ASD in the study conducted, CBT is still an effective type of therapy that reduces anxiety in individuals with ASD (Steensel and Bögels, 2015).

Through the use of quantitative research, Pahnke et al. (2013) conducted a 6-week study of the effectiveness of Acceptance and Commitment Therapy (ACT) on 28 high-functioning students with autism. The goal of this study was to adapt the skills training to adolescents and young adults with ASD with co-morbid anxiety and other mental health problems within a special school setting. Mindfulness, behavior change, and acceptance exercises were adjusted for

students with autism. These exercises were conducted in small groups, using shorter time duration, simplified language, pictures and diagrams to explain theoretical concepts and metaphors. The result of the study indicated that ACT has the potential to reduce psychiatric symptoms such as anxiety in adolescents with ASD. Students reported high rates of satisfaction post-study (Pahnke et al., 2013).

There is a growing body of evidence that DBT is an effective form of therapy in reducing anxiety (Neacsiu, Eberle, Kramer, Wiesmann, & Linehan, 2014; Ritschel, Cheavens, & Nelson, 2012). Webb et al. (2016) studied the connection between patient CBT skills, DBT skills, psychological flexibility and symptom improvements, by using quantitative research. Although the study concluded that DBT helps alleviate anxiety symptoms, there are still few studies indicating the effectiveness of DBT in alleviating anxiety symptoms, particularly with students with autism (Webb et al., 2016).

These studies indicate the potential and need for CBT, ACT, and DBT to be further researched concerning their effectiveness in alleviating anxiety symptoms in students with autism. The researchers were able to use quantitative data to provide evidence of the success of such therapies for individuals with and without autism.

Theme 3: Current Research is Limited or Lacking in the Field of Anxiety Post-Treatment

Current research is limited in the analysis of anxiety in students with or without autism, post-treatment. Most studies gather data immediately post-treatment, but it is difficult to follow patients over a long period of time. Steensel et al. (2015) conducted 3 follow-up assessments after CBT treatment. These follow-ups assessed the wellbeing of the patients three months, one year and two years after the treatment was conducted. The study compared the anxiety levels of

patients with ASD and without ASD during the two-year time frame. It demonstrated that children with ASD showed less improvement in dealing with their anxiety over time, compared to the neuro-typical group in the study. This study, though, did not ask, nor did it further investigate, why there was a decrease in effectiveness of CBT over time with these students.

Lundkvist-Houndoumadi, Thastum, Hougaard, (2015) examined the effectiveness over time of CBT for youths (9–17 years) with anxiety disorders and their parents after initial unsuccessful treatment with a CBT program. Out of 106 participants, 24 were classified as non-responsive to the treatment at the three-month follow-up. This group was then offered further treatment to support their individual needs with CBT. Nine youths participated in this study and it was concluded with quantitative data that they benefited from the individualized treatment. There was further progress at the three-month follow-up meeting and gains were maintained from post-treatment to the one-year follow-up. The study Lundkvist-Houndoumadi et al. conducted, indicates that youth with anxiety disorders can be helped by assessing their progress post-treatment and obtaining additional support targeting their needs. Further research is needed to analyze treatment retention and progress past the one-year follow-up meeting (Lundkvist-Houndoumadi, Thastum, Hougaard, 2016).

Summary of Chapter

The literature reviewed shows that there is a growing need to find appropriate anxiety treatments for adolescents with high-functioning ASD. Researchers find that students with ASD have a higher prevalence of comorbid anxiety. In addition, the literature reviewed demonstrates, overall, that Cognitive Behavior Therapy (CBT), Acceptance and Behavior Therapy (ACT), and Dialectical Behavior Therapy (DBT) help alleviate anxiety symptoms and increase the quality of life of high-functioning students with autism and comorbid anxiety (Katz, Fotti, Postl, 2009;

Spek et al., 2013; Wood et al., 2015). These therapies were effective both for students with and without autism.

Very few of the studies reviewed included analysis of post-treatment data. The post-treatment analyses that were included typically were made up of only brief questionnaires that asked how the student felt post-treatment. Although these questionnaires are informative they lack numerical data to support their results. Several of the studies analyzed post-treatment data at one month, three months, six months and one year. There are few longitudinal studies that assess patients beyond the one-year mark. It is not possible to evaluate treatment effect beyond a short period of time due to the lack of extended longitudinal studies. Another common weakness in these studies is that the sample sizes are small. In order to be more meaningful, large group studies that accurately represent the population of students with high functioning ASD and comorbid anxiety are needed.

A missing part in the research is an analysis of appropriate curriculum designed to alleviate anxiety symptoms for students in ASD. Overall, these studies demonstrate the potential for CBT, ACT, and DBT to be effective in decreasing anxiety symptoms in students with ASD. Further analysis of the effects of CBT, ACT, and DBT on students with ASD needs to be conducted.

The next chapter focuses on helping teachers integrate CBT, ACT, and DBT skills and strategies in their classrooms. Using these therapies and the practical exercises provided throughout the manual, educators can help support each child's unique needs.

Chapter Three: Methodology

According to the American Psychiatric Association (2013) found in online websites, “autism spectrum disorders are characterized by impairments in social communication and interaction, as well as restricted and repetitive behaviors/interests/activities”. Students with high-functioning autism face emotional challenges due to social, communication, and sensory challenges (Lum, Garnett, O’Connor, 2014). Youth with ASD tend to experience higher rates of psychiatric comorbidities such as anxiety disorders (Chiang, Gau, 2016). Anxiety disorders are among the most prevalent and most elevated in students with high-functioning autism, compared to the general population (Chandler, Howlin, Simonoff, O’Sullivan, Tseng, Kennedy, Charman, Baird, 2015). Previous studies suggest that the higher prevalence of anxiety in youths with high-functioning autism is linked to the difficulty they experience with social reciprocity (Sukhodolsky, Scahill, Gadow, Arnold, Aman, McDougle, McCracken, Tierney, White, Lecavalier, Vitiello, 2008) and poorer global functioning (Ung, Wood, Ehrenreich-May, Arnold, Fujii, Renno, Murphy, Lewin, Mutch, Storch, 2013). Addressing the unique needs of students with autism in managing their anxiety is paramount to their well being. Incorporating CBT, ACT, and DBT, help alleviate anxiety symptoms and increases quality of life in students with high-functioning autism and comorbid anxiety (Katz et al., 2009; Spek et al., 2013; Wood et al., 2015). Through use of the manual “Managing Anxiety in Autism”, educators can guide students in applying the CBT, ACT, and DBT skills and strategies taught throughout the manual to help students with high-functioning autism manage their anxiety. The purpose of this manual is to give these students the tools they need to independently, cope with their anxiety in and outside of the classroom.

When developing this project, quantitative and qualitative case studies were reviewed to determine the effectiveness of CBT, ACT, and DBT in alleviating anxiety symptoms in students with high-functioning autism. The research reviewed indicated that students found CBT, ACT, and/or DBT to be effective in helping them learn to cope with their anxiety. The quantitative data and qualitative questionnaires post-treatment demonstrate lower anxiety levels in the participants of the studies (Katz et al., 2009; Spek et al., 2013; Wood et al., 2015).

In order to develop this project, the author gathered peer reviewed articles and analyzed it, concluding there existed a need for developing a manual to help students with high-functioning autism cope with their anxiety and to address the question, through quantitative data, whether the integration of CBT, ACT, and DBT is an effective form of treatment for these students. After the case studies were analyzed, the researcher designed a manual to guide educators in teaching students with high-functioning autism and comorbid anxiety using a combination of CBT, ACT, and DBT strategies.

Design

After gathering and analyzing the case studies, it was determined that CBT, ACT, and DBT are effective in treating anxiety in students with high-functioning autism (Steensel & Bogels, 2015; Pahnke et al., 2013). The author created a manual for educators to use in helping adolescent students with high-functioning autism manage their anxiety, through the integration of CBT, ACT, and DBT. This manual targeted students in high school, ages 13-18 years old, but can be modified for preadolescent students, ages 9-12. It is not appropriate for students younger than 7 years old, because it is probable that children under 7 have not yet developed complex cognition (Smith, Hudson, 2013).

The manual is in sequential order and divided into four Units of Instruction: (Unit 1) Recognizing Anxiety, (Unit 2) Accepting Anxiety, (Unit 3) Learning Skills and Strategies to Manage Anxiety, and (Unit 4) Exposure Exercises. This design was adopted and considered effective because it first creates a calm, safe learning environment so that students will be able to recognize and identify the signs of anxiety arousal. Once recognized and identified, students learn to utilize specific coping mechanisms to manage their anxieties. The included exercises serve to inform and teach students effective, therapy-based practices in order to manage their individual types of anxiety.

Instruments

The instrument used to execute the manual is a lesson plan template. The manual is divided into four units and each unit is divided into four lessons. The template is organized by first displaying the materials needed for the lesson, then the purpose of the lesson is stated, along with an “opening”, the educator will use, with specific guidelines, to introduce the lesson. After the “opening” the educator will start the “activity” part of the lesson through individual or small group instruction. These activities vary in style; the lesson activity is delivered, either through direct instruction, modeling, independent work or an integration of all these styles. The instructor then closes the lesson with an assessment. The assessment is meant to determine whether the student understood and/or mastered the skills and strategies taught in the lesson. If not, the instructor looks back at the student’s assessment in order to determine where the student is struggling and modify the lesson to his or her unique needs.

This method of lesson planning is effective because the instructors are given a clear, step by step guide specifying or outlining how to teach CBT, ACT, and DBT skills and strategies.

The units build upon each other so that the students can slowly desensitize themselves to the situations that cause them anxiety.

Procedures

In the process of developing this manual, the researcher first gathered peer reviewed literature to study what past researchers have already learned and what is yet to be addressed or missing. Through the analysis of these articles, the researcher determined that CBT, ACT, and DBT are effective forms of therapy for teaching students with and without autism cope with their anxiety. After gathering data and confirming the potential of these therapies to assist students with autism in managing their anxiety, the author looked for existing manuals that help individuals cope with their anxiety through the use of CBT, ACT, and DBT. These manuals were read and analyzed to gather which strategies would be most appropriate for students with autism. The strategies were modified, if needed, for students with autism. For example, the researcher modified the lessons so that they would be used in small groups or individually. The lessons were modified to contain straight forward instructions, visuals, and they were made shorter in length. Although students with autism have unique needs, the researcher determined that many of the CBT, ACT, DBT strategies, are universal and can be used by students with or without autism.

The researcher divided the manual into four units: Recognizing Anxiety, Accepting Anxiety, Learning Skills and Strategies to Manage Anxiety, and Exposure Exercises. In Unit one, Recognizing Anxiety, the importance of creating a calm, safe learning environment is stressed. Once established, students are better able to recognize the signs of anxiety arousal. As part of creating a calm environment, relaxation skills are often utilized as a treatment protocol. Relaxation exercises prove helpful to adolescents with autism because these students often

experience high levels of physiological hyper-reactivity and sensitivities linked to emotional reactions (Jasmin, Couture, McKinley, Reid, Fombonne, Gise, 2009; Konstantareas, Stewart, 2006) These relaxation and breathing exercises help facilitate emotion regulation, which is needed to help alleviate anxiety symptoms in students with high-functioning autism (Jasmin et al., 2009; Konstantareas, Stewart, 2006).

In Unit Two, “Accepting Anxiety”, students learn acceptance techniques through CBT and ACT. “The purpose of accepting anxiety as a range of human emotions helps students to live their life in a way that is consistent with their values” (Eifert, Forsyth, 2005). “Suppressing or trying to control anxiety symptoms is viewed as the reason for their anguish” (Eifert, Forsyth, 2005). The purpose of this Unit is for students to accept their anxiety in order to manage it, not control it.

Unit Three, “Learning Skills and Strategies to Manage Anxiety”, students learn coping strategies such as Self-Talk. It is common for students with anxiety to manage their anxiety by trying to escape or avoid certain situations (Ramnero, Ost, 2007). This in turn reinforces avoidance behavior that limits their opportunities to desensitize their emotions to situations that cause them anxiety. This is a short term solution to their anxiety. In this Unit, students learn long-term solutions through the use CBT, ACT, and DBT strategies. Students commit to change their lives for a better tomorrow and then implement the strategies learned in the manual.

In Unit Four, “Exposure Practice Exercises”, students work on exposure exercises that help to desensitize their anxious reactions towards situations that provoke their elevated anxiety. Students practice the skills and strategies learned during these exposure exercises in order to better cope with their anxiety. Studies have shown that exposure exercises decrease anxiety symptoms in both the short and long term (Alizadeh, Shahverdyan, Etemadi, 2012). During

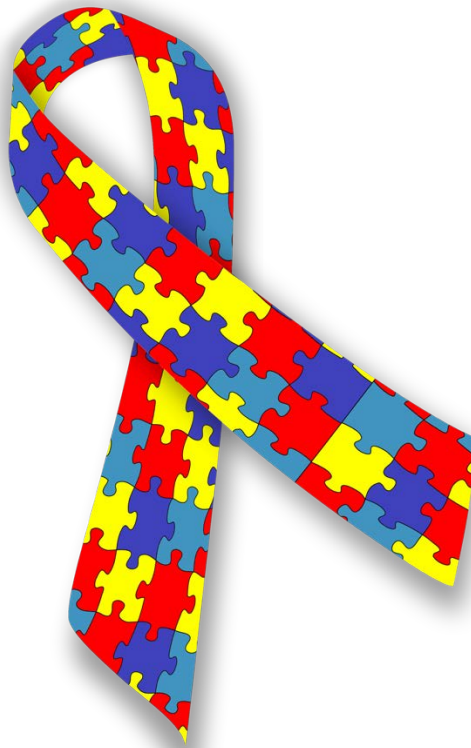
exposure exercises students have the opportunity to face their anxieties gradually in order to permit their brains to adapt to events that trigger their anxiety. This gradual exposure decreases their fear response.

Summary of Chapter

The author designed a four-unit lesson manual which combines CBT, ACT, and DBT strategies to assist educators in working with adolescents with autism and comorbid anxiety. As a background, the author researched peer-reviewed journals in order to ascertain the effectiveness of CBT, ACT, and DBT in alleviating anxiety in neuro-typical individuals. In the author's manual some of the strategies derived from the research manuals were modified for students with autism.

Chapter IV: Curriculum Project

**Managing Anxiety in Autism:
Adolescents with High-Functioning Autism
Through The use of Cognitive Behavioral Therapy,
Acceptance and Commitment Therapy, and
Dialectical Behavior Therapy**



**Darcy Valle
California State University, San Marcos
Fall 2016**

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Project Introduction

The purpose of this manual is to guide educators in supporting adolescent students who live with autism and comorbid anxiety, as well as to provide these students with the skills needed to help them cope with their anxiety disorder. According to the majority of available data, children living with autism spectrum disorders have a higher prevalence of anxiety (Simonoff, Charman, Chandler, Loucas & Baird, 2008). The range of anxiety disorders found in children who live with ASD is between 11% and 84% (White, Oswald, Ollendick, & Scahill, 2009). The overall approach of this manual is based upon three types of therapies: Cognitive Behavioral Therapy (CBT), Acceptance and Commitment Therapy (ACT), and Dialectical Behavior Therapy (DBT). These therapies utilize pedagogy which includes exposure strategies, relaxation exercises, supporting worksheets, and scientifically research-based activities that allow students with autism and comorbid anxiety to develop lifelong strategies that will assist them to manage their anxiety. Further research has shown that these types of research-based therapies are universal—that is, they are effective for typically developing children with anxiety disorders as well as children with ASD (Steensel & Bogels, 2015; Pahnke, Lundgren, Hursti and Hirvikoski, 2013).

This manual is divided into four Units of Instruction for teachers to use with small groups of students who have ASD and comorbid anxiety. These units address the importance of creating a calm, safe learning environment so that students will be able to recognize and identify the signs of anxiety arousal. Once recognized and identified, students learn to utilize specific coping mechanisms to manage their anxieties. These exercises will serve to inform and teach students effective, therapy-based practices in order to learn how to manage their individual types of anxiety. Each unit is divided into a series of lessons: Recognizing Anxiety, Accepting Anxiety,

Learning Skills and Strategies to Manage Anxiety, and Exposure Exercises. These lessons provide an explanation of the importance of each exercise toward gaining control over the students' anxiety. Each lesson, employs activities and exercises for the students to practice in a small group setting. The students are expected to complete their activities or exercises in class, as well as session-specific worksheets to complete at home to further their ability to cope with anxiety in generalized settings.

This manual is focused on and intended for adolescent students in high school, ages 13-18 years old. This manual can be modified for preadolescent students, ages 9-12, but it is not appropriate for students younger than 7 years old, because it is probable that children under 7 have not yet developed complex cognition (Smith, Hudson, 2013). "Cognitive processing becomes more advanced and complex during middle childhood, and then becomes much more elaborate during adolescence as a result of developing formal reasoning and abstract thinking at this age" (Muris, Merckelbach, Meesters, & van den Brand, 2002). The teacher is critical to the success of the curriculum: s/he is the one who facilitates the lesson in each unit by first creating a safe and calm environment so that the students to feel comfortable practicing the lesson exercises. The goal of this manual is to provide the students the tools and then to equip them to take control of their own lives independently.

Unit 1: Recognizing and Identifying the Signs of Anxiety Arousal

In order to gain control over anxiety, one must recognize and identify the signs of anxiety arousal. The purpose of this unit is to develop awareness in the student who is dealing with anxiety by using CBT, ACT, and DBT. This is accomplished through a series of progressive lessons in which the student will be able to distinguish his/her anxiety symptoms and find the root cause of it, as well.

Lesson 1.1: Creating a Calm and Safe Learning Environment

Materials:

- *Butcher paper, pre-posted on board*
- *Computer*
- *4-7-8 Video*
- *Video projector*
- *Markers*

Purpose:

The purpose of this lesson through the use of ACT is to create a safe and healthy learning environment in which the students feel comfortable, relaxed, and safe so that they are able to share their experiences and have fun as well. By making these “sessions” fun, the children will readily participate in the activities. Students may not be as self-conscious that they are being treated for their anxiety and trained to use coping mechanisms if the environment is relaxed and free of pressure. It is recommended that the teacher start the class with a mindfulness exercise in order to help them relax and become more able willing to listen to their bodies and minds. An example of one such exercise follows:

The instructor clears the classroom of furniture as much as possible. Enlist the help of the students to slowly and neatly move the desks and any other objects that would be in the way of a floor exercise. Organize the students into small groups and invite them sit down on the floor.

Depending upon the number of students and the size of the room allow, students are to sit down on the floor with enough space to be able to lie down with their legs extended in a prone position.

Opening of Mindfulness Exercise:

The instructor opens the lesson by first demonstrating the class how to breathe through the diaphragm. Speaking script can be something like: “Boys and girls, today we will be learning how to breathe and to listen to our bodies. Watch how I do it first. We will review how to do this again, so there is no rush in getting it right the first time through.”

Class Activity:

After demonstrating how to breathe through the diaphragm, return to the group and ask the students what the main actions were for breathing. Take a few answers from the class and then repeat the material again. Script something like this:

“Boys and girls this is a breathing exercise. We are going to repeat this activity again so that you know what do on your own when you begin to have shorter breaths.

First, in order to do this, I need you to lie down on the floor or sit-up crossed-legged, whichever is most comfortable for you. I want you to close your eyes and to notice your breathing. Is it faster than normal or slow? Think this to silently to yourself.

Next, while your eyes are comfortably closed, I want you to place your hands on your stomach, and notice how it is rising up and down while you breathe. Because we breathe better from our diaphragm and stomach, you are going to breathe through and from this area of your body for your exercise. When you breathe, in, your belly will go up, not your chest, and when you breathe out, your belly must go down. I am going to do this with you, but I will also walk around the

room to make sure you are breathing correctly. I need you to keep your eyes closed, relax inside yourself and simply listen to my voice. If any of the parts are too long for you when we inhale and exhale, just do the best you can. If your mind wanders off, just bring it back to your breathing. It is common amongst most people for your mind to do that. With practice, you will become better and better at this. Let's start."

1. Breathe in for 3 seconds. 1...2...3
2. Now hold it for 6 seconds. 1...2...3...4...5...6
3. Breathe out for 9 seconds. 1...2...3...4...5...6...7...8...9
4. We are going to do this for 3 minutes.
5. Let the students know when the 3 minutes are up.

Keep the students on the floor with their eyes closed. "Okay boys and girls, time to move back to breathing regular breathing, but stay where you are with your eyes closed. Just breathe as you naturally. Now, I need you to focus your attention on your toes. If your mind wanders off to something else, just that and bring your thoughts back to your focus point and relax. Next, have your mind go to your legs, your knees, your thighs, hips, torso, chest, arms, hands, fingers, shoulders, neck, mouth, cheeks, nose, eyes, ears, and forehead." (Give wait time at each body part that you say)

Assessment:

After this exercise, ask students to open their eyes and to sit up slowly and quietly. With the butcher paper up previously on the board:

Thoughts:

Physical Response:

Overall Feeling:

Script: “Now I need you to tell me what you felt while you were doing this breathing exercise. Was your heart going slower? What were you thinking? How did your eyes, mouth, ears, legs feel when you focused your attention on that area?” Ask students for their responses and write them on the butcher paper/poster board. Practice these breathing exercises every day, at the beginning of class.

Lesson 1.2: Identifying Your Anxiety

Materials:

- *Exercise worksheets*
- *Pencil*

Purpose:

Anxiety manifests through different emotions and actions. Some children demonstrate their anxiety through repetitive actions such as pacing, and others may feel bodily sensations such as hyperventilating or an increased heart rate. This step in the manual aids students to become aware of how they experience anxiety through DBT. Self-awareness is an important step in decreasing anxiety in a student who has autism. Self-awareness can be difficult for a student who is on the autism spectrum. At times, he or she can take things literally and might not understand the bodily sensations he or she is feeling. In reacting to anxiety, they may feel they are experiencing “imminent death”.

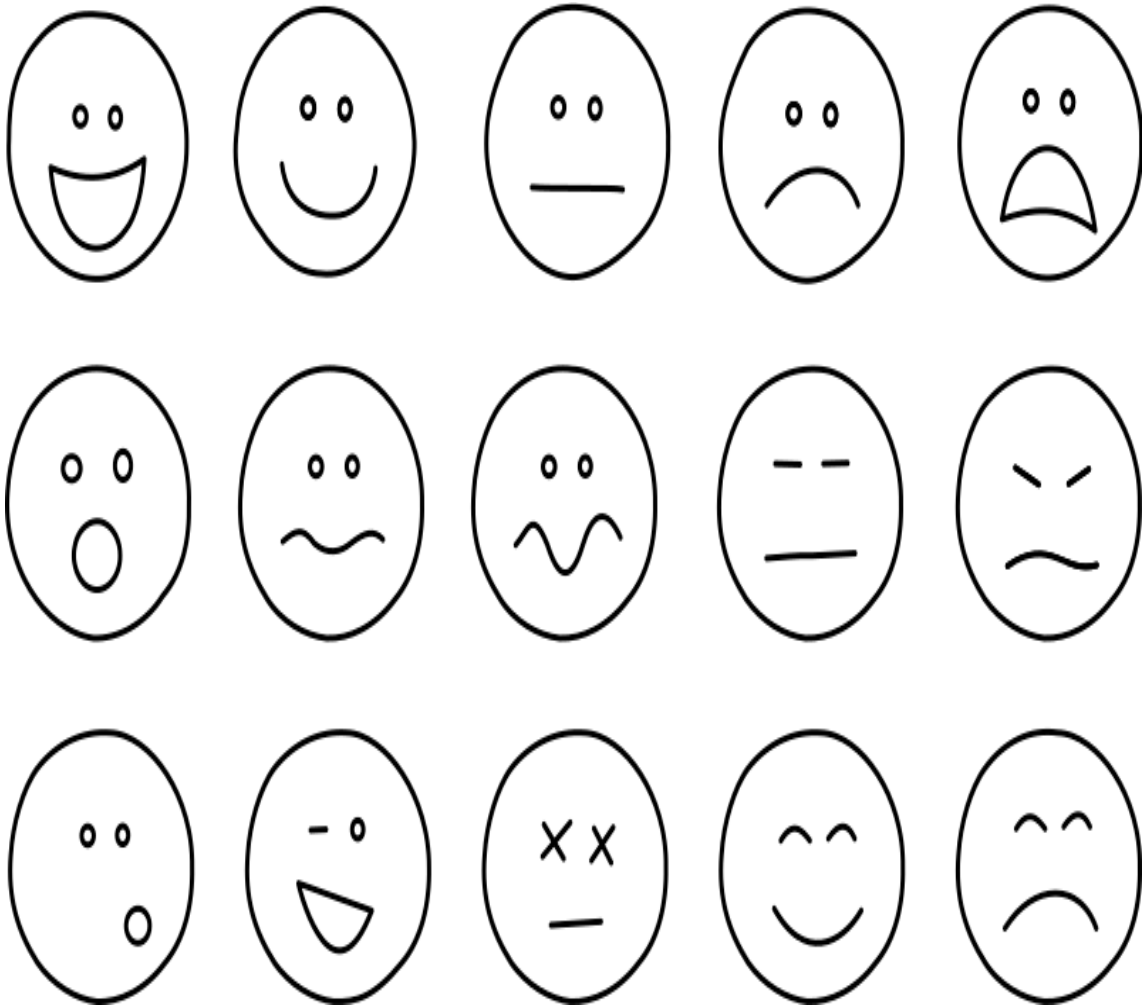
Opening:

The **instructor** opens the lesson by asking the class what makes them feel afraid or nervous. Give an example of these feelings in your own life. Script something like this: “Fear can feel different for everyone. You might not even realize you are nervous or anxious. It is important to be aware of this. That way you know what to do when these feelings do occur.”

Class Activity:

The **teacher** starts the class activity by scripting the following: “I am going to pass this sheet of paper to you. I will show you how to do it first and then you can try it on your own.” The teacher will then show the class how to complete the worksheet. The students can do it on their own or with a partner.

Write down under each face what emotion it is feeling?



Assessment:

To determine whether the students can successfully differentiate their emotions, the instructor looks over their worksheets to see whether they correctly named the emotion. This may be difficult for students with autism as it can be difficult for them to recognize facial expressions and the emotions tied to them (Bolte, Feineis-Matthews, Poustka, 2007). If recognizing emotions appears to be a challenging task for the students, go over each emotion with them. First, explain the emotion and then have them do show this emotion physically, for

example by smiling to signify being happy. They may do this on their own or as a group. Once students can recognize and identify different emotions, the students can become self-aware of their own feelings.

Lesson 1.3: How Do We Know We Are Anxious?**Materials:**

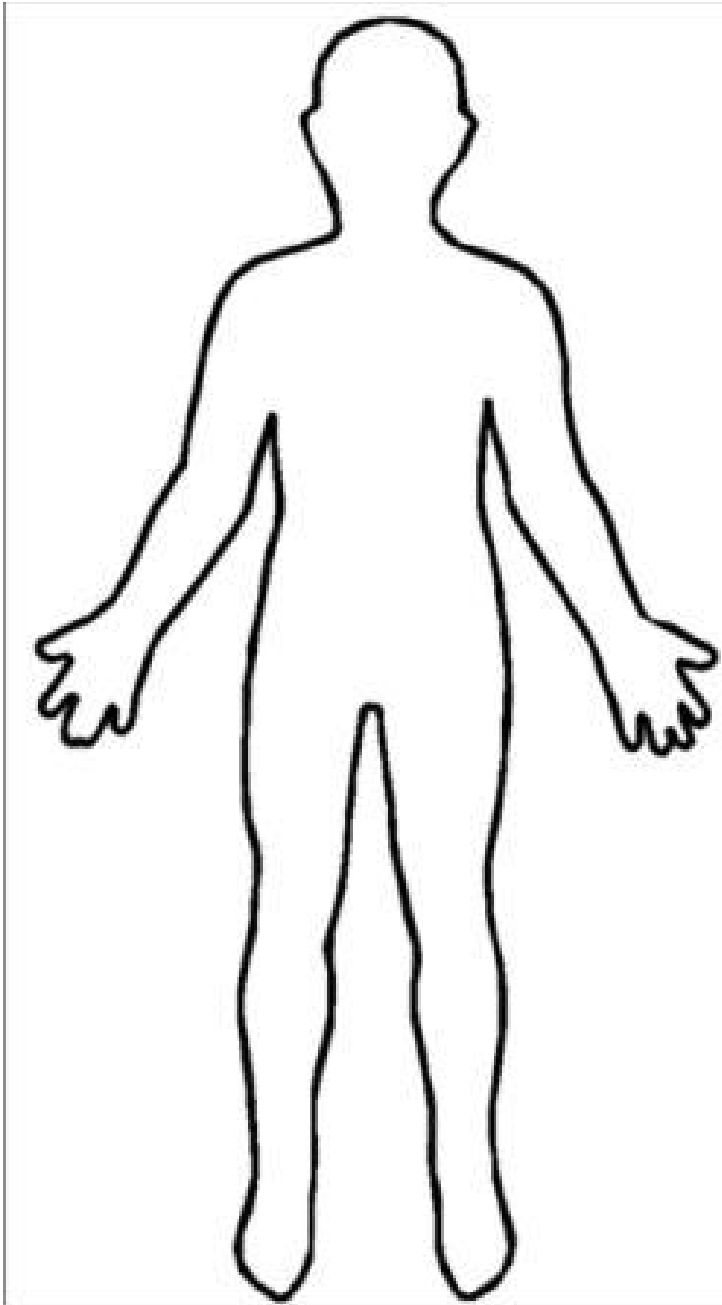
- *Exercise worksheets*
- *Pencil*
- *Butch paper (optional)*

Purpose:

The purpose of this lesson is to have students recognize and identify the signs of anxiety arousal and then to identify the root of his or her anxiety, through the use of CBT. Anxiety arousal can affect performance in school and the students' personal lives. By recognizing their anxiety symptoms, they can then learn to respond appropriately when experiencing these symptoms. This anxiety can, in turn; affect attention. Students who have anxiety as well as autism can become too focused on their environment and their anxiety symptoms, hindering their ability to perform at their optimum level in school and in their personal life (Johnco, Storch, 2015).

Opening:

The instructor begins the lesson by facilitating a discussion about the typical symptoms of anxiety arousal. Write the symptoms on the board and ask the class which symptoms they have felt. Script the following: "Look! It's the human body! Bodies can feel funny when we are anxious, nervous or worried. Using the outline drawing of the human body provided, draw a circle on the area of your body where you feel anxious nervous, or fearful. Another option would be to have the students trace each other's bodies on large butcher paper. Then have the students highlight the physical body parts they feel affected when they feel anxiety.



Activity:

The instructor guides the class in completing the next activity. Show students how to complete the worksheet by going over the given example. Then have them complete it on their own or with a partner. Script the following: “I want you to fill out as much as you can. Do not worry if you can’t think of anything now; it may come to you later. I just want you to try your best.” There are two different types of worksheets for this exercise. The open ended questionnaire is meant for students who are able to distinguish their actions, thoughts and feelings relatively easily. If your students have a harder time with this, give them the multiple choice sheet. The teacher knows his or her students best and should discern which worksheet is more appropriate for each student.

- 1) What makes you anxious?
- 2) Physical Response:
- 3) What are you thinking when you feel this way?
- 4) What do you do when you are anxious?

Script the following: “Class, the first question I want you to look at the section “what makes you anxious.” Think about events or situations in your life that make you feel anxious, nervous, afraid, or uncertain. For example, “I start to feel anxious when I am about to do a test.” Write your example on your sheet of paper and demonstrate it on an overhead projector. Give

time for students to fill out their responses. “Next we are going to look at the section: Physical Response. Think about how your body feels when you are anxious. If you need to, close your eyes and try and remember this physical feeling. When I start to feel anxious or nervous, my heart starts to beat faster and I start to have shorter breaths. What do you feel?” Write your example on the sheet so that the students may see it. Give wait time. Next, have the students go on to the third question. Script the following”, “In this column, I want you to write down any thoughts that come to your mind when you are feeling anxious. Sometimes I think to myself that I am bad or that no one loves me. What do you think? Remember, I will be the only one that will be reading this.” Again give time for students to write their answers. “The fourth question asks what you do when you are anxious. Do you run away? Scream? Do you want to eat? When I feel anxious, I sometimes just want to hide and forget what is going on at the moment. Think about what you do?” Give the students time to think about this and to write their responses. At the end collect these sheets of paper.

Option 2 worksheet

Mark all the ones that apply to you.

- 1) What makes you anxious?- Tests, confrontation, social events, people, going outside, heights, anything new, something out of routine, other.
- 2) Physical Response: Heart starts to beat faster, heavy breathing/short breaths, Hyperventilating, narrowed vision, tingly sensations on tips of fingers, and/or toes, headache, clenching of jaw, dizziness, tense muscles, yawning, other.
- 3) What are you thinking when you feel this way?- I am worthless, I am ugly, I can't do this, What if..., This is hard, I can do this, I hate this, Everyone is just out to get me, No one loves me, I don't know what to do, Other.
- 4) What do you do when you are anxious?- Pacing (Walking back and forth), biting nails, picking at skin, running away, being aggressive/violent, eat, go to sleep, substance abuse, go out for a walk, exercise, talk to other people, other.

Assessment:

The assessment is the completed worksheets recently finished in the activity. Use these assessments in order to determine whether the students can recognize the signs of their anxiety arousal and identify the root of his or her anxiety.

Lesson 1.4: Confirming the Root of the Anxiety**Materials:**

- *Exercise worksheets*
- *Pencil*
- *White board*

Purpose:

The purpose of this lesson is to determine what triggers the students' anxiety symptoms. This DBT exercise will run over a course of a week. There are several types of anxiety disorders and they may be triggered for different reasons. It is important for students to be self-aware of when and why their anxiety triggered. The possible triggers for the students' anxiety is infinite. By students knowing the source of their anxiety, they can then anticipate when their anxiety will occur and take the required steps to manage it, not avoid it.

Opening:

The instructor opens the lesson by scripting the following: "Class, it is important to know when and why your body and mind become anxious. I want you to first practice recognizing these uncomfortable feelings on your own. If you feel like it is too much, just stop and come back to it later." Explain to the class that these feelings are not random; they happen for a reason. It is important to figure out when these anxious feelings occur. As time goes by, students will become better at self-monitoring and thus increase their awareness of when their anxieties strike and take the needed steps to manage them.

Home activity:

This exercise is to be first practiced in class and then required to be finished at home. Students will complete a "Trigger Log" throughout one week. The students must be vigilant

recording events or situations that cause them to feel anxious. Show the class how to complete one “event”. The instructor may give an example of what makes him or her feel anxious and fill in the boxes of the Trigger Log accordingly. Script the following: “Class, this will be your log; I will collect it at the end of the week. I want you to pay attention to when you start to feel anxious or fearful. You don’t have to start writing in your log as soon as you feel anxious, you can do it after you have calmed down. I need you to put the date and time of when it happened. Then in the next box write down what happened. Do not give me your interpretation of what happened, just give me the facts. For example, write that you were going to take a test and then you started to feel your heart race. Once you have that written down, on the next box, write down how intense the anxiety was, 1-feeling very little discomfort to 5-having a panic attack. Then in the last box, write what you actually did. Did you try and escape? Did you scream? Whatever you actually did, write it down”.

Trigger Log

Day 1

Event:

Date:

Time:

What happened?

Physical Response:

Intensity from #'s 1-5:

Day 2

Event:

Date:

Time:

What happened?

Physical Response:

Intensity from #'s 1-5:

Day 3

Event:

Date:

Time:

What happened?

Physical Response:

Intensity from #'s 1-5:

Assessment:

The instructor observes whether the students can find the root of their anxiety. Being able to determine what triggers their anxiety may help students be less frightened and better able to manage their anxiety.

Unit 2: Accepting Anxiety

“Accept with serenity what you cannot change, have the courage to change what you can, and develop the wisdom to know the difference.” –Reinhold Niebuhr

At times students want to bury their anxiety or pretend that it does not exist. This can cause anxiety to come back full force, later on. Anxiety may never fully go away, and that is okay. The purpose of this unit is to have students come to terms with their anxiety and to accept that it is a normal part of people’s everyday lives. The focus is to start living a quality of life they want to have. The goal is that through accepting one’s anxiety students can gain control in managing it on their own.

Lesson 2.1: How Anxiety is Interfering with My Life?

Materials:

- *Exercise worksheets*
- *Pencil*

Purpose:

Anxiety can have a significant impact on students’ lives. Relationships, passions, simple day to day activities can be difficult to manage with anxiety. The purpose of this lesson is to understand in what ways anxiety is preventing the student from enjoying everyday life.

Opening:

The instructor opens the lesson by starting a class discussion on how anxiety impacts their lives. It is important to see ways in which anxiety can affect each other’s lives and by discussing their struggles amongst each other. Students understand that they are not alone and that they face similar challenges. The teacher starts the discussion by giving a personal example of how anxiety has impacted his/her life.

Activity:

The next worksheet can be completed in class or at home. It is a survey in which the student can clearly determine how anxiety is interfering with his or her life. Once the survey is completed, the instructor facilitates an in-class discussion. The instructor must not obligate students to speak about their anxiety if they do not want to. This discussion is voluntary. It is important for the instructor to remind the students that what they discuss in-class is confidential and that they are in a safe environment.

How is Anxiety impacting your life?

1. Do you avoid activities that raise your heart rate because you are afraid of inducing anxiety-like symptoms? (Ex: Running, playing sports)
2. Have you stopped doing activities you use to enjoy?
3. Does your anxiety prevent you from sleeping at night?
4. Do you find it hard to study when you are anxious?
5. Do you use alcohol or drugs to reduce your anxiety?
6. Are you avoiding public settings because of your anxiety?
7. Have your relationships been negatively affected?
8. Do you avoid watching certain TV shows or movies because they may cause anxiety?
9. Do you engage in unhealthy behavior like self-harm or smoking?
10. Do you feel embarrassed of your anxiety?
11. Do you worry often, making it hard to stay on task and accomplish work?
12. Is it a challenge to get out of the house?
13. Does meeting new people make you uncomfortable?
14. Do new experiences cause you anxiety?
15. Do you prefer doing certain activities, only if you have taken the steps to prevent your anxiety symptoms?

Assessment:

To assess the students understanding of the lesson, the teacher monitors the classroom discussion and observe whether the students can analyze how anxiety is affecting their lives. This is an opportunity for students to reflect on the effects of their anxiety and for them to ask themselves how they would like their life to be in the future.

Lesson 2.2: Normalizing Anxiety

Purpose:

The purpose of this activity is to normalize anxiety. Students with autism often have a higher prevalence of anxiety (Maddox, White, 2015). They face different challenges than students who do not have Autism. It is important to show these students that they are like every other typical child and that anxiety is an issue that almost everyone will face in their life-time. This next activity is done after a breathing exercise as the students will be more willing to participate.

Opening:

The **instructor opens** the lesson by having all the students sit in a circle. Reassure the class that everyone has fears and anxieties. Script the following, “Boys and girls, everyone has fears and anxieties and that’s okay. Even the adults who you see as heroes are sometimes afraid and anxious. Fear and anxiety have actually helped humans to survive and thrive. For example, if a dangerous animal was chasing you, you would automatically run because you were afraid. The person who was not afraid and did not run probably died. So you see, fear can be very helpful and necessary at times. Sometimes though, we do not know what to do when we feel fear or anxiety.”

Class Activity:

Next, the **teacher** gives examples of times he or she has felt anxious and say how they managed this uncomfortable emotion. The following is an example of what a teacher might say: “I have experienced anxiety like many of you. I even have panic attacks. They usually happen when I am very stressed. When I have to take a test or I have a lot on my plate, my anxiety

peaks. When I find myself feeling this way, I take deep breaths, or go out for a walk. It's normal to feel anxious. We just have to learn how manage our anxiety.” The purpose of this discussion is to normalize fear and anxiety. The teacher asks the students about some of their real life heroes and times they think these individuals may have been afraid or anxious. If the student does not know of a time their hero has felt fear or anxiety, create a story as a group about how a hero may have felt and coped with their unwanted emotions. Tell the class, “We all have fears. They may never go away completely, and that's okay. We are going to learn how to manage them.”

Assessment:

The **teacher** writes down each student's responses in order to assess whether the student can relate to other's anxieties and realize that many people face the same challenges as they do.

Lesson 2.3: Seeing Anxiety and Fear as a Necessary Part of Life**Materials:**

- *Exercise worksheets*
- *Pencil*
- *White board*
- *Dry erase markers*

Purpose:

The purpose of this lesson is for students to learn that anxiety and fear have a beneficial purpose for humans. These emotions evolved as a necessity to keep humans safe from harm and thus survive and reproduce the next generation. Students are guided into learning that their emotions are meant to protect them and that they are needed in everyday life. By accepting their emotions and not avoiding them, it permits the students to manage their anxiety more readily.

Opening:

The teacher opens the lesson by telling the students that sometimes fear and anxiety are beneficial to us. Script the following, “Boys and girls, I know that sometimes you wish your anxiety would disappear. Being anxious is an uncomfortable feeling. I know this may come as a surprise to you, but those feelings of fear and anxiety are useful to us. Fear is meant to help us differentiate when something in the environment is a threat or not. The threats our ancestors faced in the past are not necessarily applicable in today’s society. As a result, often times our anxieties and fears are imagined. Let’s take a moment to think about a threatening event that made us feel fearful or anxious.” Next, the teacher, gives an example of a threatening event in his or her life, how they reacted to it and how useful the response was. The teacher writes the following on the white board and fills it out with an example of her own.

- 1) What Happened?
- 2) What did you do?
- 3) What is useful: Yes or No

Activity:

Now, the students will do this on their own or with a partner. Give the students a few minutes to complete this worksheet and ask for volunteers to share what they wrote. It is important to normalize fear and anxiety. This enables students to understand that these emotions are part of life, but that does not mean that these emotions can take over their lives. If students have a difficult time thinking of threatening events in their lives, have them make up a threatening event with fictional characters.

Can anxiety and fear be good for you?

Directions: Write down an event that was threatening or dangerous to you. Then write down your response and how your response worked out for you.

What happened?

What did you do?

Where your actions useful? Yes or No? Explain Why.

Assessment:

The teacher assesses whether the students have grasped the concept of anxiety being a normal response to a threatening event by monitoring their discussion on whether their responses to said event were useful or not. The teacher discerns through class discussion and the completed worksheets whether students need more time and/or examples to understand that anxiety is a normal physical response.

Lesson 2.4: Accepting Thoughts**Materials:**

- *Exercise worksheets*
- *Pencil*
- *White board*
- *Dry erase markers*

Purpose:

The purpose of this lesson is to teach students with autism to become conscious of their thoughts, to notice when their anxiety starts to trigger, and evaluate their thoughts without judgment. By teaching students to accept their thoughts simply as thoughts, it lets students know that their thoughts are not absolute truth. It ends the struggle of trying to escape one's anxiety and take the steps towards managing it.

Opening:

The teacher opens the lesson by having the students complete a deep breathing exercise for 5 to 10 minutes. Although the students should know by now how to complete the breathing exercises, the teacher continues to guide the students through it. The teacher scripts the following: "We have done this breathing exercise before but I will guide you through it. Listen and do what I ask of you. Class, put your hands on your stomach. Breathe through your mouth into your stomach. See your belly rise as you breathe in and exhale slowly. Breathe in... 1...2...3...4...5...6... hold your breath... exhale slowly... 1...2...3...4...5...6..." The class does this for a few minutes. The teacher asks the class to continue to breath this way and then asks them to focus on their bodies, starting from their toes to the top of their heads. The teacher may script the following. "While you are breathing, I want you to keep your focus on your body. Notice your toes. How do they feel? Do they feel tense? If so, relax them. If your mind wanders

off, it is okay; just redirect your mind back”. The teacher continues to have the students focus on their bodies. At the end of the breathing exercise, the teacher guides the class into a discussion of what they noticed about their bodies while doing the breathing exercise. The teacher may direct the discussion with the following questions:

- 1) Did any thoughts pop into your heads while breathing?
- 2) Was there any body part that felt different when focusing on it?
- 3) Was your body tense or relaxed when you started to notice it and how different did your body feel after the exercise?
- 4) Do you think there is a connection with how your body feels and your thoughts? Why or why not?

Activity:

The next exercise is comprised of three parts intended to help students recognize their thoughts, what is happening in their bodies, and what is happening in the external environment. As thoughts come to mind, the goal is to teach students to view their thoughts non-judgmentally and to recognize thoughts in the context of what is happening in their bodies and the external environment. First, have the students write down thoughts they may have at the moment or reoccurring thoughts they have throughout the day. Give some time for students to write down their answers. Next, have the students imagine their thoughts and place those thoughts on top of an imaginary wave, a moving car or a cloud passing by. The students imagine the thoughts, acknowledge them and then let them go. The teacher may script the following: “Take notice of the thoughts that pop in your mind. Imagine them on a wave. Now imagine the wave breaking into the shores.” If students have trouble visualizing their thoughts just have them imagine the object, either a wave, a cloud, car, etc... and have them see it pass by through their mind.

Remind students that it is normal to have unsettling thoughts. During the second part of the exercise, students take notice of their body sensations and write them down on the worksheet provided. Finally, during the third part of the exercise have students take notice of what is happening in the environment around them. By staying in the present moment and by practicing being aware of what is going on with their bodies in the context of the environment, students are better able to disengage from obsessive thinking.

Directions: Write down what your thoughts are, your bodily sensations, and what is going on in your external environment:

What are you thinking?

What is your physical response at the moment?

What is happening around your environment?

Assessment:

The teacher checks whether students understand that thoughts are not absolute truths by observing the students answers during the classroom discussion. The reflection also serves as an assessment tool to indicate whether the students are learning to accept their emotions, thoughts, bodily sensations, and environment. The teacher must discern whether the students need more time either practicing or mastering this skill.

Unit 3: Managing Anxiety in Students with ASD

The students that have autism along with anxiety have probably been dealing with their anxiety for many years. At this point in their lives, managing their anxiety may seem like an impossible feat. By using CBT, DBT, and ACT, this next unit focuses on teaching the skills and strategies needed to take control of their anxiety and live the quality of life they deserve and want.

Lesson 3.1: Commitment to Managing Anxiety

Materials:

- *Exercise worksheets*
- *Pencil*

Purpose:

The purpose of this lesson, through ACT and DBT, is to get students to commit to change their lives for a better tomorrow. Students with anxiety often learn to deal with it by trying to escape or avoid certain situations. This may solve the problem in the short term, but what we are trying to do is give these students long-term solutions.

Opening:

Start the class by having a discussion on what activities or pleasures anxiety has prevented them from doing them? Script the following: “In the past anxiety has prevented me from doing (give an example). Think of something that anxiety has prevented you from doing?” After taking a few volunteers script the following: “Boys and girls, you can’t hide from these unpleasant events and feelings because that will prevent you from living your life. We are going to take all these uncomfortable feelings with us and learn how to manage them. By committing to living well, with compassion and kindness, you live your life to the fullest!”

Activity:

The teacher passes the Commitment Worksheet to the students. This should be completed in class, unless students are unable to finish it or are not comfortable filling it out in the classroom. In that case, let the student take the worksheet home to complete and turn it in the next day. After the class has completed the worksheet, have students pair up and share their responses. After 5 minutes, ask volunteers to share their responses.

Commitment Worksheet

Name:

What do you want to do?

Give a description of what is preventing you from doing it?

List the things you have done to manage your struggles:

Do they work? Yes or No

Are you willing to learn different strategies? Yes or No

If No, what is stopping you from trying new strategies? List these

Come talk to me at the end of completing your worksheet.

Assessment:

In this lesson, the teacher assesses, through the Commitment Worksheet and classroom discussion whether the students committed to changing their lives and whether they understood what it entails to commit. Students should know how anxiety has affected their lives and if previous strategies to cope with their anxiety have helped or not.

Lesson 3.2: Self-Talk Strategy to Managing Anxiety

Materials:

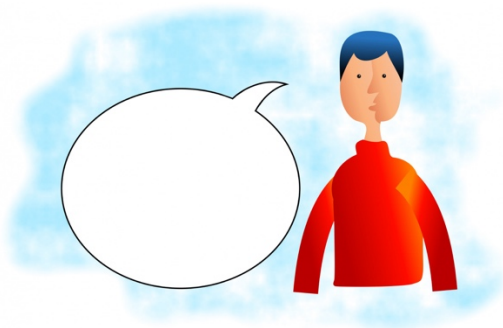
- *Exercise worksheets*
- *Pencil*
- *projector*

Purpose:

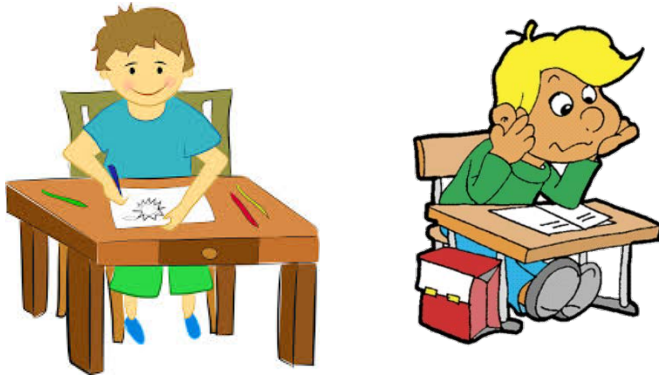
The purpose of this lesson is to have students become aware of how their thoughts are connected to their emotions. Once students realize the connection, they must attempt to reduce their distress, fear, and anxiety with a coping strategy that uses self-talk.

Opening:

The teacher first introduces the lesson by demonstrating on the projector a cartoon with a thought bubble.



The teacher explains the concept of the thought bubble to the class. Next, the teacher shows the following pictures and explain that two people in the same situation can have differing thoughts because they perceive the world differently.



Have students create thought bubbles with two different thoughts for each cartoon.

Finally, discuss with the class how they think thoughts affect emotions.

Activity:

Students are expected to do the following class activity with partners with guided support from the teacher. Give each student the following worksheet:

Dave and Sue's Scenario

Directions: Fill each box with how person 1 and 2 would think, feel, and act according to the following event: In a few weeks, Dave and Sue are going on a field trip to Laguna Beach to paddle board. Dave has gone to Laguna several times and is on the swim team, he has even tried paddle boarding. Sue, on the other hand, does not know how to swim and has never gone to Laguna. She almost drowned in a pool, when she was 8 years old.

What is Dave/Sue thinking?

Dave:

Sue:

What is Dave/Sue feeling?

Dave:

Sue:

What did Dave/Sue do?

Dave:

Sue:

The teacher asks for a student volunteer for to read the prompt from the Dave and Sue Scenario. The teacher gives wait time for the students to complete the worksheet. Next, students write down what they think Dave and Sue feel about going on the field trip. Finally, students predict how they think Dave and Sue will react to the situation. The completed worksheet should reflect Sue having negative/ unsettling thoughts, emotions, and actions, while Dave should have positive thoughts, emotions, actions. The idea is to help students understand that thoughts may have an impact on their emotions and as a result on their actions as well. After completing the worksheet, the teacher has a classroom discussion on how they think Dave and Sue's past experiences affected their thoughts, emotions, and actions. The teacher then asks the class, "How did Sue's thoughts affect her actions? How could she change her thought?" The teacher will make sure students understand that Sue's actions can be influenced by her thoughts. The teacher passes around the following sheet and script the following, "In this next worksheet, change Sue's thinking from negative to positive. Predict how she may then feel as a result? How may this change her actions?"

Sue:

Change Sue's thoughts to positive ones:

How will her feelings change as a result of this?

How will her actions change as a result of her feelings?

Once the worksheet is completed, the teacher scripts the following: “Thoughts and emotions can influence our actions. Even when you are having negative thoughts or emotions, that does not mean you do not have control over your actions. They can however, affect how you react to the circumstances. The ability to change your thoughts to positive ones will become a tool to use when one feels anxious. Next week, we will practice becoming aware of the negative self-talk and use positive self-talk to help you cope with your anxiety.” The teacher has students complete the following assignment.

Self-Talk

Directions: Write down an event that happened at home that caused you anxiety. Write down what your thoughts, emotions, and actions were. Next, change your thoughts to positive ones, and note how your emotions and actions could have been effected.

Event:

What were your thoughts?

What were your feelings?

What did you do?

Positive Thoughts:

Change your thoughts to positive ones:

Predict how you would have felt as a result?

How would you have reacted differently as a result?

Assessment:

The teacher checks whether students understand the connection between thoughts, emotions, and actions through classroom discussion of the topic and completed classroom activity. The teacher determines whether students know how to use the self-talk strategy by looking over their take home assignment of the week. After the assignment has been completed, the teacher assesses whether the class learned how to use the self-talk strategy through a classroom discussion on how it may or may not have helped them cope with their anxiety. The teacher reminds the class that this is just one strategy to use when he or she feels anxious.

Lesson 3.3: Anxiety Journal for Managing Anxiety**Materials:**

- *Journal*
- *Pencil*

Purpose:

This lesson encourages students with autism to face their anxiety head-on by writing a daily journal of their anxieties, fears, and worries. Writing an anxiety journal is another tool for students to use when dealing with their anxiety. Writing their thoughts, anxieties, and worries will permit students to be gradually exposed to their anxieties and give them an opportunity to delve into their anxieties and reflect on what their actual fears are.

Opening:

The teacher begins the lesson by having the students start with a breathing exercise. After the breathing exercise, the students begin a classroom discussion of their fears, worries, and anxieties. The teacher guides the classroom discussion and then introduce the concept of an anxiety journal. The teacher scripts the following, “An Anxiety Journal is meant to help you cope with the anxiety you are dealing with. This is a long-term strategy. As time goes on, you will hopefully see a decrease in your anxious thoughts and emotions.”

Activity:

The teacher fills out a journal entry as an example and script the following, “Today we are going to practice how to write in your journal. After practicing today, you will continue to write in your journal at home, four times a week, for the next three weeks.” The following ideas will help students write in their journals:

- 1) Find a quiet spot, with no distractions, to write for at least 20 minutes.

- 2) Write about a worst-case scenario that provokes anxiety to you. For example, an anxiety about taking a test and failing.
- 3) When writing, remember to use your five senses to describe your fears, worries, and anxieties. For example, describe the red marks that may appear on a test.
- 4) Remember, you are doing this assignment correctly, if you are feeling any unsettling emotion while writing, such as fear and anxiety. (Remind the class that these emotions are normal and in the long run, they will feel them decrease. It gets worse before it gets better.)

After going over how to write in their journal, the class completes one journal entry in the class. If a student has a difficult time expressing his anxiety in words, the student may draw in his/her journal to express anxiety, worries, or fears. Have students take their journals home for the next three weeks. At the end of each week, the teacher will look over the students' journals.

Assessment:

The teacher assesses whether the students are first able to write a journal entry, expressing the anxieties they may have. The teacher looks over their entries at the end of each week. Journal entries should be descriptive and detailed. At the end of the three-week trial, the teacher asks the class to write about their progress dealing with anxiety and discuss if this journal was or was not helpful to them.

Lesson 3.4: Strategy Cards for Coping with ASD & Anxiety**Materials:**

- *Note cards*
- *Pencil*

Purpose:

The purpose of this lesson is for students to reflect on all the strategies and tactics they have learned in managing their anxiety and to practice using them when their anxiety strikes. Many strategies were provided in this manual. It may be helpful for students to review all the strategies they can use when their anxiety starts to become an issue.

Opening:

The teacher opens the lesson by having students first review all the strategies and skills that they have learned throughout this manual. The teacher asks for volunteers to name and/or describe the skills and strategies learned. If the students are having a difficult time remembering, the teacher should list the following skills on the board:

- 1) Breathing exercises
- 2) Meditation
- 3) Awareness
- 4) Acceptance
- 5) Commitment
- 6) Anxiety Journal
- 7) Self-Talk

Next, the teacher asks the class the following: “Do any of you have any other strategies that you use to help you cope with your anxiety in a way that does not include yourself trying to

escape or suppress your anxiety?” The teacher takes volunteers from the class and discuss any new possible strategies. Any strategies that the students agree are positive and helpful should be put down on the list. It is important to add two more strategies to the list: Immersion and Diversion. Explain both of these strategies.

Immersion- When one begins to feel anxious, the individual can immerse him or herself into whatever they are doing. For example, if the student is drawing or doing laundry, focus complete attention on that.

Diversion- When one begins to feel anxious, the individual can divert his or her attention to something else. For example, if one is beginning to feel anxious while doing homework, the student can take a break and go outside and play.

These are two quick, simple strategies that may be used when feeling anxious.

Activity:

Pass around 10 note cards to each student. Explain to the class that they are going to write down the strategies listed on the board. Students should describe the strategies on their flash cards. The flash cards should look something like the following:

Note Cards

Front

Self –Talk

Back

Explanation: Replace negative thoughts with positive thoughts.

Give students enough time to complete their note cards. After the class has finished, have them choose their favorite strategies and discuss with a partner how and when they would use that strategy. The teacher monitors the students' discussion and provide any support needed. Remind the class that these note cards are to serve them as a collective list of all the strategies they can use when their anxiety starts to become an issue.

Assessment:

In order to assess student understanding, the teacher monitors classroom discussion of the strategies they have learned throughout the manual and how and when they would use them.

Unit 4: Exposure Practice Exercises

The final unit of this manual involves students exposing themselves to their anxieties. Exposure therapy is commonly conducted by cognitive behavioral therapists. Studies have shown that gradually exposing individuals to their anxiety, their anxiety level decreases in both the short and long term (Steensel and Bogels, 2015). The idea is to expose the students to their anxieties, little by little, so that their brains may adapt to events that trigger their anxiety. With gradual exposure, their fear response decreases with time. Built into each lesson are exposure exercises using different scenarios. Students are able to practice the skills and strategies learned to better cope with their anxiety.

Lesson 4.1: Formulating a Plan of Action: Plan A

Materials:

- *Strategy cards (Unit 3)*
- *Pencil*

Purpose:

The purpose of this lesson is for students to begin to cope with the idea of facing their anxieties and to have them practice this in a low level anxiety provoking setting. The common response of a person who faces anxious thoughts or events is to avoid or try and escape the entire situation, this reaction reinforces their anxiety. By formulating a plan and executing that plan in a practice scenario, students are better prepared when experiencing heightened anxiety.

Opening:

The teacher opens the lesson by instructing students to partner up and take out their strategy notes from the previous lesson. Students review the strategies they can use when they

are starting to become anxious. After a few minutes, go over the strategies with the class and write them on the board:

- 1) Breathing exercises
- 2) Meditation
- 3) Awareness
- 4) Acceptance
- 5) Commitment
- 6) Anxiety Journal
- 7) Self-Talk
- 8) Immersion
- 9) Diversion
- 10) Other

Script the following: “It is not enough just to know the types of strategies you can use during an anxious moment. It is important to practice them so that when you find yourself in such a situation, you will be better prepared and the anxiety provoking event will not be as daunting. You will learn how to take the necessary steps to cope with your anxiety and then practice these steps.”

Activity:

In this activity, the teacher discusses how problem-solving can be used in order to develop a plan to help students manage their anxiety. This plan is a basic layout and changes depending on the students’ circumstances. Students use the strategies most helpful to them. Write the following problem-solving steps on the board. The students write this on a blank sheet of paper to refer to later.

Step 1: Notice your body and surroundings. Are you feeling anxious?

- What strategy can you use to calm yourself? Ex: Breathing exercises

Step 2: What are you worried about?

- Ex: I am worried about failing my math test.

Step 3: Specify the issue.

- Ex: I get anxiety before every test because I do not want to fail the class and disappoint my parents. I tend to lose sleep over it, grind my teeth, and pace a lot.

Step 4: How would you like to react differently to this?

- Ex: I would like to feel more relaxed before the test.

Step 5: Brain Storm possible strategies to make this situation less fearful.

Step 6: Choose the best strategy.

Once this has been discussed, have the students pair-up and create an anxiety provoking scenario. The students then go through all the steps in order to try and solve their problem. They will write this down in a blank sheet of paper to turn in at the end of class. Give the class 10-20 minutes to complete this assignment. Once the class has completed the assignment, ask for volunteers to talk about the steps they took to resolve their problem.

Assessment:

In order to measure student understanding, the teacher monitors classroom discussion on problem-solving skills and also on their partner interactions when doing the activity. The teacher assesses whether the students understood the steps by looking over the assignment they completed and determine if students were able to go through all the steps and use prior skills and strategies appropriately.

Lesson 4.2: Formulating a Plan of Action: Plan B**Purpose:**

The purpose of this lesson is to give students with autism and comorbid anxiety a solid foundation on how to communicate their needs to their peers. Students with autism often have difficulty interacting with their peers and having comorbid anxiety creates more anguish for the student. Fears about social interactions then become a vicious cycle. Students avoid social situations to avoid anxiety, embarrassment, etc. The fear increases, and social interactions and situations become more difficult to manage. This lesson teaches students how to formulate a plan when communicating their needs to others by using a DBT management strategy plan.

Opening:

The teacher opens the lesson by telling the class of a time when he or she had a challenging social situation; for example, going to a party or meeting someone new or just telling a person no. Next, the teacher has the students choose a peer buddy and has them talk about a time when they were in a challenging social situation. After this discussion, script the following, “I know being involved in social interactions may cause anxieties. It can be a challenge to say what your wants and needs are to others. We are going to learn how to do that here. Just as we created a plan to help manage anxious situations, we will have a plan that deals with social anxieties.”

Activity:

The instructor has students take out a sheet of paper to take notes. The instructor goes over the steps on how students can effectively voice their opinions, needs, and wants. According to DBT effectiveness interpersonal skills, the steps are as follows:

- 1) Explain the issue to the person, with facts.
- 2) Explain how the situation makes you feel. Use “I feel” and “I think” statements.
- 3) Explain needs and wants in a clear and concise manner.
- 4) Explain how this will benefit the other person.
- 5) Make compromises, if needed.

Next, go over the steps by using the following example: The issue involves person A borrowing clothes from person B without permission. Person B does not like this, but is afraid of confrontation. It is difficult for person B to use the appropriate words to express this.

- 1) Explain issue: “I noticed that you borrowed my clothes without asking me first”.
- 2) Explain feelings about issue: “I feel upset that when I want to wear specific clothes, I can’t find them, because you did not let me know when you borrowed them”.
- 3) State needs: “Please ask me first if you can borrow my clothes”.
- 4) Explain how this benefits other person: “This will alleviate my anger when I am not able to find my clothes, because I will know that you have them. I value our friendship and do not want to get upset over this.”
- 5) Compromise: “If I am not around or you cannot contact me for whatever reason, just leave me a note. I will be sure to ask you if I can borrow your clothes as well.

Tips:

- 1) Express needs in a clear and concise manner.
- 2) Use soft words such as “sad, upset, hurt, annoyed”.
- 3) Avoid inflammatory language such as “you are” and “hate”.
- 4) Think of ways to make the other person feel good about what is being asked of them.
- 5) Use humor.

Next, have the students pair-up with another student. Have the students think of a scenario and go through the steps to try and resolve the situation. Students must write up their plan first, using the steps. When completed, show it to the teacher and practice it out loud. During these student practices, the teacher monitors the class and supports the students as needed.

Once the students are finished role playing, the teacher explains that they are now going to try and use these skills in real life. They must try and use this plan twice a week either at home or at school and record their results at the end. As an incentive, let students choose a preferred activity if the assignment has been completed.

Assessment:

The instructor observes class discussion and role play to determine if the students have mastered DBT interpersonal skills to effectively communicate their wants and needs. The instructor analyzes student results as well.

Lesson 4.3: Practice Role Playing Exercises

Purpose:

The purpose of this lesson is to have students practice their plans in a low-level anxiety-provoking scenario. This is done through role play. This may seem like a daunting task to students who face the challenge of having autism and comorbid anxiety. By practicing the plan as well as the strategies learned in previous lessons in a safe environment, students can take the necessary steps to change how they respond to an anxiety provoking situation.

Opening:

The teacher opens the lesson by reviewing the steps students should take when they find themselves in an anxious situation. After going over the steps with the class, the students pair up, think about an anxious situation with their partner and then go through the steps to try and solve their problem.

Activity:

After reviewing the steps and practicing them once more, script the following: “Today we are going to practice these steps using a more realistic scenario. We are going to role-play. I need a volunteer to demonstrate how we do this.” The next step is to ask the class for a low anxiety-provoking scenario. For example, “I cannot find my car keys.” Create roles. The student plays the main character in this scenario and the teacher is in supporting role. This scenario is acted out. Have the student act out how he or she would start to behave in this anxious situation. Have the student go through each step aloud.

Problem: I lost my keys!

Step 1: I am starting to breathe faster and I am flustered. What can I do to calm myself? I will do a few breathing exercises.

Step 2: I am worried that I will not find my keys and I will be late for school. I will change my thoughts. I have lost my keys before and I always find them. I can get another set of keys if I did lose them.

Step 3: The problem is I need my keys and I cannot find them.

Step 4: I would like to find my keys and not lose them as often as I do.

Step 5: What can I do to be less anxious at the moment? I can ask for help, breathe slowly, and focus my attention on one area of the house at a time to look for the keys, distract myself and then come back to the issue.

Step 6: Right now, I am feeling anxious about the situation. I will ask my mom to help me find the keys and while she looks, I will continue to get ready for school so I can take a break from the situation.

After the role playing is done, have the students pair-up and act out a low anxiety-provoking scenario. The teacher monitors the class and supports and coaches when needed. Give the class 15-25 minutes to complete the task. When everyone is done, ask for volunteers to role play their scenario in front of the class. End the lesson with a classroom discussion on the steps they learned and whether they were helpful or not.

Assessment:

The teacher checks for understanding of the steps by monitoring classroom engagement when students were role playing with their partner. The teacher observes whether the students went through the steps, evaluated their alternative strategies, and selected the appropriate strategy for their anxiety scenario.

Lesson 4.4: Exposure in a Real Life Scenario**Purpose:**

The goal of this lesson is to put into practice what the students learned in the previous lesson using a real life scenario. Students are being exposed more to their anxieties as we go through this unit with the idea that each time it becomes easier for the student to deal with his/her anxiety.

Activity:

Emphasize to the class that in order to master the skills they have learned; they must practice them in all types of scenarios. Let them know ahead of time that they are going to practice these skills in a real situation. It is normal to feel anxiety during these events. Have students pair-up and brain storm about anxious events at school. Once the students have written down situations that cause them anxiety, have them decide on a situation that causes mid-level provoking anxiety; for example, going to lunch or noises. Make sure that only one person within the pair is anxious in the chosen scenario. The student who is not anxious in the situation supports the student who is. This student keeps the strategy cards available, as well as the notes on the steps they can use to resolve the problem. This is to be done three times for two weeks. During each lesson, each partner takes turns practicing the same mid-anxiety provoking scenario. Students will also write in their anxiety journal after each event. Once finished, let students engage in a preferred activity.

Assessment:

The teacher assesses whether students are getting a better grasp of the skills learned through student input and their journal entries. The teacher asks students whether it is becoming difficult or easier to cope with their anxiety.

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Chapter Five: Project Recommendations

Students with high-functioning autism often experience clinically elevated anxiety symptoms in academic and social settings. (Simonoff et al., 2008). These students face unique challenges such as sensory input, social and communication impairments. Unfortunately, there are currently, very few manuals to aid students with high-functioning autism in managing their anxiety symptoms. The manual project, “Managing Anxiety in Autism”, utilizes CBT, ACT, and DBT to help alleviate anxiety symptoms in adolescent students with high-functioning autism. Current research recognizes that CBT, ACT, and DBT, reduce anxiety symptoms in both neuro-typical students and students with high-functioning autism (Barrett, Duffy, Dadds, & Rapee, 2001; Bodden, Bogles, Nauta, Haan, Rigrose, Appelboom, Brinkman, Appelboom-Geerts, 2008; Kendall, Hudson, Gosch, Flannery-Schroeder, & Suveg, 2008; Ost, 2014; Neacsiu, Eberle, Kramer, Wiesmann, & Linehan, 2014; Ritschel, Cheavens, & Nelson, 2012; Swain, Hancock, Hainsworth, & Bowman, 2013).

Based on the research, this manual was created to support students with high-functioning autism reduce their anxiety symptoms and to gain control of their lives. This manual uses strategies, that are universal, but are also modified for students with high-functioning autism. The lessons are conducted in small groups for short time durations; the lessons are also modified to contain straight forward instructions and visuals. This chapter examines the overall efficacy of the manual, “Managing Anxiety in Autism” by explaining the project implementations, project limitations, literature review and future project and research suggestions.

Lessons Learned

One of the most important lessons I learned during the development process of this manual is that thorough investigation of the research subject is vital for developing an effective and reliable

manual. I also learned that my resources and time were limited and this, in turn, taught me to be conscientious in using time and creative in planning the lessons for the manual. Overall, I confirmed that beginning early and formulating a plan are necessary to develop an effective manual for students with high-functioning autism and comorbid anxiety.

It was essential to develop a manual derived from research based practices. I wanted to prove through peer-reviewed journals that CBT, ACT, and DBT are safe and reliable forms of treating anxiety for students with high-functioning autism. I analyzed several peer-reviewed journals on the efficacy of CBT, ACT, and DBT on students with or without autism. It was a challenge to find peer-reviewed journals on the efficacy of CBT, ACT, and DBT on students with high-functioning autism; there are limited studies on this subject matter. I had to find articles that did not always match the issue I was researching, but this helped me realize the need for a manual for student with high-functioning autism and comorbid anxiety. I also looked for possible manuals already in place for students with high-functioning autism and comorbid anxiety. Although I found several manuals for treating anxiety using CBT, ACT, or DBT, I could not find manuals specifically designed to treat students with high-functioning autism and anxiety using these therapies. By studying the existing manuals for treating anxiety through the use of CBT, ACT, and DBT and applying that information to students with high-functioning autism and their unique characteristics, I determined what strategies might work with this specific student population.

I wanted to be as thorough as possible in the development of my project. I began the project the previous academic year, but failed to complete it within the allotted time. I learned that it is important to gather resources in advance of writing process and to formulate a plan to develop my manual and the lessons contained in it. I gathered the limited resources available and

developed a template for the manual. This helped structure the manual and determine what was necessary to further develop the project. With the realization that I had limited time and resources, it was a challenge for me to create lessons that were effective for students with high-functioning autism and comorbid anxiety. As a result, I had to modify material or use universal strategies in the manual.

I learned that it was important to start developing the project early. By beginning early, I was able to thoroughly research applicable data to support the material and techniques contained in the manual. Developing this project also made me realize that building and expanding on existing ideas and research provides the means for developing new concepts and applications. For example, although the strategies developed from CBT, ACT, and DBT were, historically, used with neuro-typical students, they can be more universally applied. With a few modifications, everyone can benefit from them.

Project Implementation Plans

I plan to implement the manual in a classroom setting with students who have high-functioning autism and comorbid anxiety. I plan to add more homework assignments and assessments to the manual in order to continue to strengthen the skills learned in the classrooms; This manual is designed for educators to use in their classrooms, lessons can be covered in sections and do not have to be completed in one classroom period. This permits educators to use the manual at any pace they deem appropriate. The manual requires very few supplemental materials, and all the worksheets are provided within the manual. The manual is designed in this way to be useful to all educators, without any need for supplemental funding.

It is important to note that this manual can be used for neuro-typical students. The strategies within this manual are universally designed for all student demographics.

Limitations of Project

When designing this project, I wanted to create a manual that could be implemented effectively in a classroom setting. Because this manual was developed during the summer and I did not have access to an appropriate classroom, I was unable to implement a pilot study. In the Fall, I moved school districts and began working with Prek-Kindergarten students; I did not have adolescents with autism and comorbid anxiety available on whom to conduct a study. Another limitation of the project was time constraints. Existing time constraints precluded analyzing more data derived from implementing the project in a classroom setting with students who have high-functioning autism and comorbid anxiety. Such time constraints also precluded post-treatment analyses of students' response to use of the manual.

Future Research or Project Suggestions

There are several studies that demonstrate, through quantitative data, that CBT, ACT, and DBT are effective in treating anxiety, but there are limited studies that address anxiety in students with high-functioning autism (Chalfant, Rapee, & Carroll, 2007; Reaven, Blakeley-Smith, Culhane-Shelburne, & Hepburn, 2012; Reaven, Blakeley-Smith, Nichols, Dasari, Flanigan, Hepburn, 2008; Sofronoff, Attwood, & Hinton, 2005; Wood, Drahota, Sze, Van Dyke, Decker, Fujii, Spiker, 2009). I believe there is great value in continuing studies on the efficacy of CBT, ACT, or DBT in alleviating anxiety symptoms in students with high-functioning autism. For future curriculum development and instruction, I suggest that educators incorporate general education students in the lessons. Educators can have neuro-typical students with anxiety participate in these lessons along with students with high-functioning autism and comorbid anxiety. Psychologists, service providers, administrators, para-educators can also become part of the development of the curriculum and effective instruction. Training staff in these strategies

will, potentially, develop effective instruction within the school. Service providers can teach these strategies to address student anxiety. Broad based training in this area is important because students suffering from anxiety may go to other staff members for help, not just the educator. Having others involved in the support of students with high-functioning autism and comorbid anxiety fosters a community of care and acceptance. Schools need to be involved in supporting students with high-functioning anxiety and comorbid anxiety because every staff member has an impact on these students lives and can contribute ideas to the development of the curriculum.

Summary/Conclusion

I first encountered the issue of students with high-functioning anxiety and comorbid anxiety in a public school setting. I found many students with autism struggling with managing their anxiety. The schools I observed did not address this crippling issue and, as a result, this became a subject of interest to me.

Throughout the process of designing the manual, “Managing Anxiety in Autism”, I determined there to be a deficiency in supports for students with high-functioning autism managing their anxiety. There are manuals that use CBT, ACT, or DBT to support individuals with anxiety but not specifically students with high-functioning autism and comorbid anxiety. I decided to combine the benefits of all three therapies, CBT, ACT, and DBT, to help students with high-functioning autism manage their anxiety. The manual was developed through the use of research articles, methodologies, new ideas, old ideas and current strategies and skills that have been modified for students with high-functioning autism. I found common themes in the peer-reviewed journals and grouped them accordingly: 1) There is a higher prevalence of anxiety among students with ASD compared to their neuro-typically developing peers. This greatly emphasizes the need for specific supports for the students with autism and comorbid anxiety. 2)

Research has shown that CBT, ACT, and DBT help alleviate anxiety symptoms in neuro-typical individuals and individuals with high-functioning autism. 3) Currently, research is limited or lacking in the field of anxiety post-treatment (Katz et al., 2009; Hofmann, Heering, Sawyer, Asnaani, 2009; Webb, Beard, Kertz, Hsu, Bjorgvinsson, 2016).

In order to create an effective manual to help students with high-functioning autism manage their anxiety, I needed to consider the following in order to determine a methodology to use: 1) The qualitative and quantitative data 2) the intended audience 3) the instruments to be used. The target audience, educators and students with high-functioning autism and comorbid anxiety, became the driving factor in developing the template of the manual.

As stated in chapter 4, the manual is organized in four units and within each unit there are four lessons: (Unit 1) Recognizing Anxiety, (Unit 2) Accepting Anxiety, (Unit 3) Learning Skills and Strategies to Manage Anxiety, and (Unit 4) Exposure Exercises. This makes it easy for the teacher to know what materials they will need for the lesson and how to start and end the lesson. The strategies and skills are modified, if needed, for the unique needs of students with high-functioning autism.

The peer-reviewed journal articles demonstrated through qualitative data that CBT, ACT, and DBT help alleviate anxiety symptoms in neuro-typical students and students with high-functioning autism. Although the manual was developed to guide teachers in supporting students with high-functioning autism manage their anxiety, the research suggests that to further instruction and curriculum, the entire school staff should be involved in using this manual. Para-educators, service providers, psychologists, administrators can all benefit from learning the strategies and skills used in CBT, ACT, and DBT in order to alleviate anxiety symptoms in all

students. Anxiety is a common mental health concern in adolescents and as such should be addressed by the entire school staff.

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